On the Properties of the Fabric Processed by a New Plastic Aftertreatment. (I) : Measurements of the Running Crease Resistance

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It was microscopically shown that by the new method the thickest skin layer of the rayon yarn or staples was effectively penetrated by the plastic liqor, (wich had only been very poorly attained by the usual method,) to the result that the obtained rayons were made to possess higher resilience and higher knot strength and elongation as shown in the following table. (The higher resilience is shown in the following separate paper).

Fibers	wet Strength (g/d) wet	Δ(g/d) w	Elong. (%) w	Denier (d)	Knot Strength dry (g/d) k	(g/d)kw	Knot Elong. wet (%) k	(%)kw
Untreated Benberg yarn	1.15	—	21.4	93	1.67	1.09	13.5	20.0
Treated Bend. y.	1.39	20.0%	27.5	116	1.91	1.39	15.1	28.1
Untreated Crimped Staple	1.66	—	29.0	5.25	1.03	—	16.6	—
Treated C. S.	1.80	16.63	32.8	5.62	1.25	—	18.1	—
Untreated 2-bath Method S.	1.56	—	30.8	1.35	1.58	—	15.38	—
Treated 2-bath M. Staple	1.96	25.63	30.9	1.34	2.08	—	16.7	

The importance and the technical significance of this new method already stated was specially emphasized in that the rayons, especially viscose rayons could only be relieved from their present inconsistency in their inevitable and inborn properties: the inconsistency, which, arising from the method of preparation now available, consists in the fact that the fiber, having the more tensile strength depending on the thickness of the skin, the lesser strength it will tend to possess under higher twists or a knotted state.

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31. On the Properties of the Fabric Processed by a New Plastic Aftertreatment. (I)

Measurements of the Running Crease Resistance

Narao Saito

(Horio Laboratory).

A short introductory comment on the running crease resistance was given together with the results obtaind with some fabrics available on the market, including that of the U. S. A. and England.

The fabrics processed after the method described in the foregoing paper gave

Fabrics	Plastic liq. & the condition of appilcation			Degree of Recovery from of the Treated				Creasing of the Untrated		The increased Amt. of Recov.	
				warp		weft		warp	weft	warp	waft
	liq.	dip min	cure min	Angle	(%)	Angle	(%)	(%)	(%)	(%)	( )
Spun Ravon Serge a	(A_2) 1/2.5	1.5	5	139	77.4	139.5	77.6	61.7	55.5	15.7	22.1
〃 〃	〃 1/3	2	6¼	1335	74.2	135	75.0	〃	〃	12.5	19.5
〃 〃	〃 〃	4	6¼	132	73.4	131.5	73.1	〃	〃	11.9	17.6
Spun Rayon Mouss eline	(A_2) 1/3	2	6¼	148	82.2	152.5	84.0	56.0	61.0	26.2	23.8
〃	〃 〃	4	6¼	145	80.6	153.0	85.0	〃	〃	24.6	24.0
Rayon Crape	〃	50′		136	75.5	127.5	84.0	39.5	40.0	36.0	30.9
	〃	3	3								
Benberg Crape	〃			149	82.0	123.0	68.4	71.1	60.0	11.7	8.4
	〃	4	7								
Cotton Broad Cloth	〃			94.5	52.3	96.0	54.0	37.0	40.0	15.0	14.0
	〃	2	6¼								

the following date as tested by the improved Shirley Institute Method.

These results actually surpass those which as hitherto been usually obtained, and this the author deem to have originated from the fact that the proportion of the plastics, both thermosetting and thermoplastic in nature were distributed and set in and out of the fiber itself, the fromer mostly in the core.

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32. On the Contineuous Method of Preparation of Viscose. (I)

On the Continuous Mercerisation

Masao Horio and *Michihiro Takahama*

(Horio Laboratory)

It was found that the following method was effctive for the preparation of slury of alkali-cellulose in the course of the continuous process of manufacutring the alkali-cellulose by means of the screw press.

A cylindrical space has a rotaing shaft equipped with a number of bars as in a stirrer, into wich the pulp is charged from one side with a definite proportion of alkali liquor. While these two are moved forward a slury is prepared together with a proper condition for an effective mercerization, and these are transported directly to the scew press. Those number of bars afford a best efficiency when they